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ABSTRACT

Despite the fact that students over age 25 will soon comprise the majority in higher education, programming and resource allocation at many universities remain inadequate to meet adult needs. Institutions have also failed to invest in adult education research. At the same time, pressures for objective assessment of student learning in higher education are increasing. Faced by these challenges, the University of Phoenix has developed a comprehensive outcomes and impact assessment program to assess the effects of a university education on students, particularly adult students. Process assessments are conducted using the Academic Quality Management System, a family of instruments and measures designed to monitor the student's day-to-day activities in the educational environment. Components include the student and faculty end-of-course surveys; student comment analysis system; grading practices analyses; registration survey; graduation survey; and comments to the chair. The second part of the program, the Adult Learning Outcomes Assessment project, is an interdependent group of measures to assess the extent to which the institution is accomplishing its fundamental mission and purposes. Components are the comprehensive cognitive assessment; affective impact assessment; alumni impact survey/interview; faculty impact survey; employer impact survey/interview; capstone research project assessment; and qualitative case studies. The findings of these assessment activities are built into regular institutional reporting systems, and administrative and academic managers are held accountable for their assessment profiles. The University of Phoenix program serves as a precedent for other institutions in the evolution of assessment into a condition for conducting the business of higher education. (YLB)

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Outcomes Assessment: Responding to Societal and Economic Challenges Through Adult Higher Education

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Outcomes Assessment: Responding to Societal and Economic Challenges Through Adult Higher Education

On Trial: Failure to Respond to Changing Demographics

The National Center for Education Statistics predicts that adult students over age 25 will soon comprise the majority of the nation's consumers of higher education in the U.S. Despite these statistics, adult education is seldom the topic of major journals in educational research. A recent sample of the Chronicle of Higher Education found that--of articles focusing on students, faculty, or teaching-- fewer than 10% did so in appreciation of the adult student as an identifiable subgroup. Public funding formulae for higher education do not carry appropriate mandates to assess the needs of the new majority, and to meet those needs in proportion with their representation in the population. Educators, administrators, and developers of curriculum and texts have shown little recognition that half of their textbooks are being used by adult students. Educational planning for the adult student at most colleges and universities has been limited to developing restricted offerings in evening classes in recognition of the fact that 80 percent of the over 25 year old group works and has significant personal and professional obligations beyond the school environment. Administrators and most staff do not work at night. Therefore, the adult programs at most campuses have an unsupported, skeletal appearance and feel. Tenured faculties are generally not required to teach in the evening, and since there are seldom incentives to do so, the adult education program has become the province of adjunct faculty, many of whom are professionals who work in the subjects they teach. Being taught by a working professional is fortuitous for adult students, who generally disdain being taught by someone with no practical experience. However, it does not address the general problem of inadequate university attention or resource allocation to meet the needs of the adult student.

On Trial: Failure to Invest in Adult Educational Research

Serious questions about the return on this post-secondary educational investment have been raised by business and industry, the federal government and its auspices for educational research, and by members of both the congress and state legislatures. Since 1970, the cost of post-secondary education has increased at almost twice the rate of inflation. Contributing to this financial desperateness are continuing reductions in the amount of federal aid colleges and universities have used to subsidized rising costs, the wilting of stock and bond markets which lower the return on college and university endowments, and sputtering state economies which result in less dollars being available to subsidize public higher education. At a time when higher education is being forced to cut back programs and services, it is also being directed by state legislatures, the U.S. Department of Education, and the accrediting agencies to institutionalize objective measures for assessing what their student are actually learning.

The assessment movement has profound implications for the management of higher

education in a faltering economy. However, only a tiny share of the RD&E dollar for higher education is directed toward this emerging majority. Of the $1.2 billion the U.S. Department of Education spends on RD&E in higher education, only $164 million, or 13.6%, is spent on research in adult higher education. Even this estimate is generous. Jeffrey Gilmore, Director of the USOE Office of Higher Education Research and Development, indicates he is aware of only $10 million being spent exclusively on adult higher education research in the current fiscal year. The current response of both public and private colleges and universities to financial cut-backs is to eliminate both educational programs and services. According to Tifft (1990), Bryn Mawr College is phasing out five graduate schools, including Spanish and Anthropology; Lehigh University eliminated its classics department, while Northwestern University cut its nursing and dental hygiene programs. Columbia University, which has already eliminated its linguistics and geography departments, will follow the lead of the University of Chicago and eliminate its school of library science. How are these decisions made? While some are tied to declining numbers of majors in a particular degree, others are axed as the result of decisions which have as much to do with campus and alumni politics as they do with comparable educational worth of a school or department.

What about the role of assessment? Instead of leaving the elimination of increasingly precious educational dollars to the vagaries of subjective academic decision-making, would it be more practical to use the assessment of learning outcomes as the basis for keeping or eliminating a degree program? But what if a popular high revenue program on a campus scored the lowest in terms of student achievement? Would it be cut before a less popular but highly effective program? Historically, the demonstration of achievement seldom plays a major role in the life of a university education program. Even less is the role played by the measures of outcomes and impact. More often, the achievement of the academic mission of an institution takes a back seat to the generation of revenue. (We need only look at the athletic programs at this nation's colleges and universities to understand that brutal fact.) But what of the other uses of assessment that do not expose this uncomfortable hypocrisy? What about rewards to faculty whose students demonstrate that a value-added education has, in fact, occurred? The same would go for research dollars, equipment funds, and addition of new faculty. And what about using assessment as away to determine upon what educational model educational dollars would be spent. Do adults, for example, learn more, as much, or less in a traditional classroom designed for an 18-24 year old, than adults in a classroom designed to meet their needs? What is the societal impact, in economic terms, of the skills and knowledge gained in the classroom on one day, and applied to the workplace on the next?

The National Response

We have discussed the evolution of the assessment movement in another paper (Tucker & Murphy, 1990), and will only touch upon it here. Of the some 3,000 accredited institutions of higher education in the United States, less than one-third of one percent had

institutional assessment programs in place in 1986. One-third of these assessment programs were isolated to particular subjects (Werner, 1987). The picture in 1990 is different. Change (September/October, 1990) reports that over 80% of colleges and universities have some kind of assessment underway. These assessments range from the administration of a single test or graduate survey, to the coordination of a comprehensive assessment effort. Currently, 66% of the colleges and universities are developing their own assessment instruments. Two out of three institutions have obtained at least some results from their assessment research. Over 50% of the public institutions are working under a state mandate to conduct assessment. While there are no statistics maintained on the breadth or investigative rigor of these assessment efforts, the overwhelming impression one obtains from attending assessment and evaluation conferences is that most evaluation researchers are severely constrained in their assessment efforts by internal political obstacles, primarily from organized representatives of faculty.

The Response of One Adult Centered University

In 1987, faced with the challenge to develop an assessment program, the University of Phoenix recognized that there were very few off-the-shelf ways to assess the effects of a university education on students, particularly adult students. The University's decision, made with full realization of the high cost and effort involved, was to develop a comprehensive outcomes and impact assessment program from the ground up. This program was to be added to and integrated with the University's existing process assessment system, a system that had been fully functioning for over five years. The observations in this paper skip over the long hours that went into the development and implementation of appropriate problem conceptualizations, measurements, designs, and methods. Presented here is the final product, as it is currently implemented in the University's 32 learning centers in five states. Understanding the structure and interdependency of these assessment systems, we believe, offers valuable insights into the workings of adult assessment. Many elements of this assessment program will generalize directly to other settings, as has been the case within the University as it expands the number of its learning centers and educational delivery systems (e.g., distance education). Other elements may be more unique to the University's particular institutional or academic structure. For the technically interested, all elements of the University's process, outcomes and impact assessment system are woven together in a multitrait, multimethod research program.

The Evidence: University of Phoenix Process and Outcomes Assessment

Table 1 identifies the major components of the University's process and outcomes assessment systems. From their inception, the University's Academic Quality Management System (AQMS) and the Adult Learning Outcomes Assessment (ALOA) project were conceived as developmental in nature because of their inherent design, validation, and implementation complexities, and because of the fact that relatively little information is available on evaluation methods and practices for the assessment of adult student learning

Table 1

University of Phoenix On-ground Process and Outcomes Assessment

PROCESS ASSESSMENT **Academic Quality Management System (AQMS)**	**OUTCOMES ASSESSMENT** **Adult Learning Outcomes Assessment (ALOA)**
Student End-of-Course Survey	Comprehensive Cognitive Assessment
Faculty End-of-Course Survey	Affective Impact Assessment
Student Comment Analysis System	Alumni Impact Survey/Interview
Grading Practices Analyses	Faculty Impact Survey
Registration Survey	Employer Impact Survey/Interview
Graduation Survey	Capstone Research Project Assessment
Comments to the Chair	Qualitative Case Studies

processes and outcomes. While the AQMS preceded the ALOA, they are viewed as two halves of a complete assessment program.

You will see in Table 1 that we have separated these activities into assessments of process and outcomes. Process assessments, which we refer to as the Academic Quality Management System (AQMS), consist of a family of instruments and measures designed to monitor the student's day-to-day activities in the educational environment. At the center of the AQMS are the end-of-course surveys and the student comment analysis system, a system that classifies and stores over 100,000 student comments per year in a computerized knowledge base. Information from process assessment is most often used for formative purposes such as assessing quality and compliance, performing interim program diagnoses, and making small scale resource allocation decisions. Outcomes assessments, which we refer to as the Adult Learning Outcomes Assessment (ALOA) project, consist of an interdependent family of measures designed to assess the extent to which the institution is accomplishing its fundamental mission and purposes. Unlike the AQMS, the ALOA has no center. Each measure is carefully designed to complement the whole to provide a panoramic view of the University's institutional effectiveness. Information from outcomes assessment is most often used for summative purposes, including decisions about the efficacy of individual programs and delivery systems.

Process Assessment: Academic Quality Management System

Student End-of-Course Survey. Students in all UOP courses complete an end-of-course survey which focuses on student satisfaction with educational delivery, educational content, and administrative and environmental support. These measures are viewed primarily as short-term satisfaction issues and are of significant value in diagnosing immediate problems which may interfere with the learning environment. The empirically validated scales contain Likert-like scaled items. Currently over 75,000 student-end-of course surveys are completed yearly. This constitutes an 85-90% response rate. Information from the student end-of-course survey is analyzed daily and is reported to faculty, area chairs, and academic administrators.

Faculty End-of-Course Survey. The University's requirement that faculty be qualified practitioners of the subjects they teach provides a valuable resource for assessing whether curriculum is up-to-date and technically sound. Faculty are also our best resource for determining whether students are professionally and academically prepared to benefit from their educational experiences. The faculty end-of-course survey, which takes about five minutes to complete, captures knowledge and routes it to appropriate academic staff. Similar to the student-end-of-course survey, the Likert-like scaled items address the University's mission. Five thousand surveys are completed annually. Information from the faculty end-of-course survey is analyzed daily and is reported to faculty, area chairs, and academic administrators.

Student Comment Analysis System (SCAS). The back side of the End-of-Course Survey asks students to provide specific comments--in their own words--about faculty, curriculum, university services, or any other educational matter of concern to them. Approximately 100,000 handwritten comments per year are received from students via this comment system. Both theory and our practical experiences suggest that these comments are a particularly valuable source of information for evaluating programs and services. Accordingly, the University has developed a knowledge-base system for classifying, storing, and retrieving these comments in report formats for use by faculty, curriculum developers, and university administration. The Student Comment Analysis System (SCAS) is unique to the University of Phoenix, and provides valuable short-term indicators of the educational process. Currently, 23 different reports are issued monthly to various University departments and faculty.

Grading Practices Analyses. Grade point averages (GPA's) awarded to students are studied across faculty, programs, and campuses. The bimonthly GPA reports list GPA and variances according to program, location, and faculty member. Faculty and administrators receive this information.

Registration Survey. This survey, completed during the registration process, asks UOP students what factors influenced them to choose UOP over alternative institutions, what major academic and professional goals they hope to achieve as they enroll in UOP, what learning/teaching methods are most effective in helping them to assimilate and retain knowledge, how they rate the overall effectiveness of the registration process, and what their employers' opinions are of UOP programs. This survey also secures important demographic and marketing information that will serve to reach potential students who would benefit from UOP programs. This instrument uses a 5-point Likert-type scale for a majority of the items. Approximately 9,000 surveys, which take about 15 minutes to complete, are administered yearly.

Graduation Survey. Asks graduating UOP students to give their perceptions of the quality of their UOP education by rating all aspects of the University's educational and support services, indicating the degree to which they met educational and professional goals, the degree of effectiveness of UOP learning/teaching methods in helping them to learn and retain knowledge, how UOP education compares in quality to traditional colleges and universities that they attended, what effect their research project had at their place of work, and what their employers' opinions are of UOP programs. This survey also uses a 5-point Likert type scale and takes about 10 minutes to complete. Over 5,000 graduation surveys are administered annually.

Comments to the Chair. All UOP students, faculty, and staff are provided a convenient mechanism for writing directly to D . John Sperling, the University's Founder and Chairman. All comments are read by Dr. Sperling and actionable issues are forwarded to appropriate departments for further investigation.

Outcomes Assessment: Adult Learning Outcomes Assessment (ALOA)

The primary objectives of the ALOA project are (1) to provide University of Phoenix students with useful information about their educational achievement and needs, both as students and as working adults; and (2) to provide the University of Phoenix with a comprehensive picture of the impact of its educational programs on the personal and professional lives of its students.

Comprehensive Cognitive Assessment. This inclusive entrance and graduation assessment, which takes approximately three hours to complete, provides students with a personal profile of their knowledge, judgment, and problem-solving skills related to the learning objectives of the core curriculum for their degree program. Students receive a detailed report of their results from which they can gain valuable information about their educational strengths and areas in need of improvement. The comprehensive assessment for each degree program contains items developed under a item response theoretic (IRT) model. Items are developed, validated, and internally normed (Tucker, 1989). Over 5,000 thousand comprehensive assessments are administered yearly across all degree programs.

Affective (Professional Values) Assessment. The assessment of affective growth is concerned primarily with the value one places on newly acquired professional knowledge and skills. Decades of study of successful professionals show that they place a high value on certain attitudes and skills. Among these are: (1) commitment to teamwork and cooperation; (2) effective oral and written communications; (3) self-confidence and a sense of competence; and (4) critical thinking and evaluation skills. Learning objectives in these affective areas are integral to the University's curriculum. This comprehensive value assessment takes one hour to complete and contains empirically validated scaled, ranked, and open-ended items. Approximately, five thousand assessments are distributed yearly.

Alumni Impact. Alumni are surveyed to obtain a long term view of the impact of their University of Phoenix education now that they have had sufficient time to integrate their learning with the demands of their current career and personal responsibilities. Using empirically validated scales driven by the University's mission, the alumni survey inquires of UOP alumni as to what factors influenced them to attend UOP, what major personal and professional goals they have achieved as a result of their UOP educational experience, how effective the UOP teaching/learning model was in helping them achieve their educational goals, the impact of their research project in their organization or profession, and their employers' opinions of UOP programs since their graduation. Again a 5-point Likert like scale is used for the majority of the items. This survey takes about 10 minutes to complete.

Faculty Impact. The University's requirement that faculty be successfully employed practicing the subject they teach, provides a unique opportunity for practicing professionals to independently assess students' achievement. In addition, faculty are surveyed to determine the impact of teaching on their professional growth and development.

Employer Impact. The unique mission of the University of Phoenix to serve working adults demands that assessment be carried to the work place. Employers are surveyed to obtain an impartial, long term view of the impact of the University's educational services on their employees, both as citizens and as professionals working to serve their organization's mission. This instrument contains scaled, ranked, and open-ended survey items. In-person interviews provide qualitative supplement to the information obtained in larger scale from the surveys.

Research Project Assessment. The capstone nature of the student research project makes it an ideal source of information about students' ability to critically appraise and solve applied problems of direct relevance to their professional objectives. Review panels evaluate students' projects for their mastery of individual subject areas as well as evidence that they integrate the many skills required to carry out an applied research study. Two hundred projects are randomly selected for review each year using criterion referenced rating and iter-rater reliability systems.

Utilization of Assessment Information

However meritorious the findings of assessment activities, there is always the danger that important findings will remain buried in dusty reports. Recognizing this danger, the Council on Post-secondary Accreditation established the standard that regional accrediting bodies should require evidence of the constructive use of assessment information as a condition of continuing accreditation. In response to this standard, most regional accrediting bodies are requiring some evidence of utilization from 1992 visits forward. Many state governments, also, are requiring that assessment information be used to improve programs and services. The University of Phoenix has ensured effective utilization by building the findings gained in the assessment activities into regular institutional reporting systems, and by requiring that administrative and academic managers account for their assessment profiles.

The Verdict

The case we have presented is only a snapshot of a complex litigation. Our institution continues to expand the nature and scope of its educational activities even as we compose these final comments. In a few short years, assessment has evolved from being a line item in an accreditation report to a condition of conducting business. However, a favorable verdict is not just winning one case, but using this case as a precedent for all institutions of higher education to educate a competitive and adaptive workforce.

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